



February 9, 2017

CHS Inc.  
395 164<sup>th</sup> St.  
South Sioux City, NE 68776

Re: Notice of Violation(s), Sioux City Wastewater Discharge Permit No. 2015-19-1.

The Significant Non-Compliance (SNC) contained herein is issued for pH and reporting violations during January 2017.

During the January 29, 2017 process start up, CHS reported an issue to the Pretreatment Office on January 30, 2017. The reported issue involved the failure the effluent pH adjustment pump. The pump failure resulted in wastewater discharging above pH limit. The initial report submitted disclosed hourly average pH. Review of this data indicated that twelve (12) of the hourly average readings were above the 11.5 s.u. permit limit; two (2) of these readings were above 12.5 s.u., which by 40 CFR 261.22 is considered a **HAZARDOUS** discharge and is prohibited. It is expected that the facility maintain compliance with all issued permit limits 100% of the time; not on a calculated average.

A meeting was called with CHS representatives and South Sioux City on February 1, 2017. Prior to the meeting all of the pH data collected for the month of January was requested for review. As part of 40 CFR 403.12(g)(6); "Any industrial user that monitors a regulated pollutant more frequently than required by the Control Authority must submit these results to the Control Authority at least twice per year". The facility was given till Monday, February 6, 2017 to submit the pH data for January 2017.

Review of the data has resulted in the following discharge pH violations that were not reported within 24 hours of the violation as required by 40 CFR 403.12(g)(2):

- 1/2/2017-At 9:09 pm there were two (2) pH readings below permit limit
- 1/17/2017-At 4:26 am-4:31 am there were four (4) pH readings below permit limit
- 1/8/2017-At 5:10 AM-5:11 AM there were five (5) pH readings below permit limit. There is no additional data reported after a reading of 3.0 s.u. at 5:10:44 AM until 5:41:16 AM. The pH data was trending downward and with no additional data for 31 minutes when the report shows 5.31 s.u.
- 1/13/2017-At 6:16 AM-6:18 AM there are five (5) pH readings above permit limit

The facility is being issued 4 violations for not reporting instances of non-compliance on a discharge parameter being monitored more frequently than the control authority as a compliance control point, each violation shall be \$1,000.00 fine.

Review of the data from the reported discharge violation which occurred 1/29/2017 is that there were two instances of a sustained discharge pH above permit limit.

- The first instance had a duration of 1 hour and 58 minutes (11:18 AM-1:16 PM):
  - There are eight (8) reported pH readings for this time frame, all are above permit limit. As is was explained the system takes a pH analysis every “millisecond” for this reason it is assumed that there was at least one pH reading a minute during this non-compliance event for 118 readings that would have been outside permit limit.
- The second had a duration of 8 hours and 56 minutes (2:12 PM-12:09 AM):
  - There are seventeen (17) reported pH readings for this time frame, all are above permit limit. As stated above, it is assumed that there was at least one pH reading a minute during this non-compliance event for 536 readings that would have been outside permit limit.
    - There was also a duration of 23 minutes where the discharge was above 12.5 s.u. which is considered **HAZARDOUS**.

Review of the submitted Corrective Action items to control a situation like this from occurring in the future seem adequate but it is also advised that CHS adjust the controls on the pH adjustment system to allow for more room between the set control point and the permit limit to allow some room for error or reaction time in the event of a non-compliance. As is has been explained, the system is set up to adjust the discharge pH to just above the 5.0 s.u. permit limit as a cost savings. Also with the number of pH violations above permit limit there seems to be the same issue on the other end. pH is regulated as an instantaneous reading and each instantaneous reading is considered a compliance data point and is enforceable as such. For this reason the facility is being issued 706 pH violations for the month of January and a fine of \$1,000.00 per violation.

Due to the facility discharging **HAZARDOUS** pH for a duration of 23 minutes, a separate fine of \$1,000.00 per minute shall be issued.

In addition to the above violations of pH, the facility is also in violation of maintaining compliance with slug discharges as required by 40 CFR 403.5(b) and 403.8(f)(6). A “Slug Discharge” is any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge. It is expected that an Industrial User implement controls to prevent and mitigate these types of discharges. Based on the nature of the wastewater and based on numerous conversations had with facility staff the reported “tank droppings” are considered a slug load as are all of the above referenced pH violations. CHS has reported ten (10) slug loads since August 2017, each one of these shall be issued a \$1,000.00 fine, and an immediate action needs to take place to isolate these slug discharges and an alternative disposal of this waste needs to be coordinated.

All of the instances of significant pH non-compliance listed herein are also considered a slug load and need to be addressed as such. No additional fines shall be issued for this item. The facility has until March 1, 2017 to submit all discharge pH data for 2016 to the Pretreatment Office for review of compliance. The data reviewed for January is concerning and it is necessary to determine what types of WWTP process inhibition may have been tied to slug discharges from CHS during 2016.

As far as the discharge permit #2015-19-I, issued by the City of Sioux, applicability is concerned due to the current treatment agreement between the City of South Sioux and Big Ox Energy, it has been reviewed by EPA Region 7 and is enforceable until its expiration. For the purpose of this notice of Significant Non-Compliance \$743,000.00 in fines is being issued to CHS and will require formal publication in the Sioux City Journal.

If you have questions or comments, or would like to schedule a meeting to discuss, please call me at 712-279-6987 within 10 days from receipt of this letter.

Respectfully,

A handwritten signature in black ink that reads "Desiree McCaslen". The signature is written in a cursive, flowing style.

Desiree McCaslen, City of Sioux City  
Pretreatment Manager

cc: IDNR Field Office 3  
City of South Sioux  
EPA Region 7

